

Title (en)  
PNEUMATIC TIRE

Title (de)  
LUFTREIFEN

Title (fr)  
PNEUMATIQUE

Publication  
**EP 4205998 A4 20240228 (EN)**

Application  
**EP 21861503 A 20210823**

Priority  
• JP 2020144438 A 20200828  
• JP 2021030856 W 20210823

Abstract (en)  
[origin: EP4205998A1] Provided is a pneumatic tire in which uneven wear of a tread portion is sufficiently suppressed during high-speed running, and which has excellent durability. This pneumatic tire has a side portion and a clinch portion, wherein: in a meridian cross section, the distance  $H_a$  from a bead baseline to the outside portion in the width direction of the clinch portion is greater than the distance  $H_b$  to the inside portion in the width direction; the complex modulus  $E^*$ s of the side portion, as measured at 70 °C, a frequency of 10 Hz, an initial distortion of 5%, and a distortion rate of 1%, is less than the complex modulus  $E^*$ c of the clinch portion; and, furthermore, formula (1) and formula (2) below are satisfied, where  $W_t$  is the cross-sectional width of the tire when installed to a standardized rim and filled with air to an internal pressure of 250 kPa,  $D_t$  is the outer diameter, and the virtual volume  $V$  is the volume of the space occupied by the tire.  $1600 \leq D_t^2 \times \pi / 4 / W_t \# 2827.4V + 1.5 \times 107 / W_t \# 2.88 \times 105$

IPC 8 full level  
**B60C 13/00** (2006.01); **B60C 1/00** (2006.01); **B60C 3/04** (2006.01); **B60C 11/03** (2006.01); **B60C 15/06** (2006.01)

CPC (source: EP US)  
**B60C 1/0025** (2013.01 - EP); **B60C 3/04** (2013.01 - EP); **B60C 11/033** (2013.01 - EP US); **B60C 13/00** (2013.01 - EP); **B60C 15/06** (2013.01 - EP US); **B60C 2001/005** (2013.01 - EP); **B60C 2013/006** (2013.01 - EP); **B60C 2015/0614** (2013.01 - EP US); **B60C 2200/04** (2013.01 - EP US); **Y02T 10/86** (2013.01 - EP)

Citation (search report)  
• [E] EP 4177082 A1 20230510 - SUMITOMO RUBBER IND [JP]  
• [A] EP 3321107 A1 20180516 - SUMITOMO RUBBER IND [JP]  
• [A] JP 2015160485 A 20150907 - SUMITOMO RUBBER IND  
• [A] EP 1992506 A2 20081119 - SUMITOMO RUBBER IND [JP]  
• See also references of WO 2022045078A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 4205998 A1 20230705**; **EP 4205998 A4 20240228**; CN 116056914 A 20230502; JP 2022039428 A 20220310; JP 2022039942 A 20220310; JP 6880541 B1 20210602; JP 7479595 B2 20240509; US 2023311586 A1 20231005; WO 2022045078 A1 20220303

DOCDB simple family (application)  
**EP 21861503 A 20210823**; CN 202180051087 A 20210823; JP 2020144438 A 20200828; JP 2021030856 W 20210823; JP 2021075801 A 20210428; US 202118022646 A 20210823